

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

February 4, 2022

TO: Christopher J. Roscetti, Technical Director
FROM: Brandon Weathers, Resident Inspector
SUBJECT: Oak Ridge Activity Report for Week Ending February 4, 2022

Oak Ridge Environmental Management: During the second week of the Contractor Operational Readiness Review for the Initial Processing Campaign (see 1/21/22 and 1/28/22 reports), Isotek declared a formal pause of the review activities on January 26. Isotek management identified two reasons for declaring the pause: 1) “the project has sustained a series of equipment failures [sic] issues primarily due to unforeseen colder than normal weather conditions” and 2) Isotek has “experienced significant impacts to staffing due to COVID-19 beyond [their] control.” As a result, Isotek stated that these issues prevented them from fully demonstrating their capabilities in a timely manner. The Contractor Operational Readiness Review team had not finalized potential findings and observations at the time of the pause. An Oak Ridge Environmental Management team also provided oversight of the Contractor Operational Readiness Review.

Over the course of the review activities leading up to the formal pause, DNFSB staff members observed six pauses (“step backs”) in operations during the demonstrations because the operators could not perform the steps as required by the procedures. Isotek distinguishes between a step back, procedure suspension, and stop work condition. Per Isotek’s procedure, a step back should be a situation that can be immediately corrected. The DNFSB staff observed that one step back was left open for three days. Isotek’s procedure does not require formal documentation of a step back, even if it is left open for several days.

A DNFSB staff member also noted that the emergency drill participants did not account for a potential external release of radiological material and therefore, they did not communicate any pertinent instructions to the operators who were working outside of the radiological release area. Additionally, the emergency drill pass/fail criteria were subjective and lacked specific objectives that the drill participants needed to meet.

Isotek plans to resume the Contractor Operational Readiness Review with the same review team in the near future. Following a successful Contractor Operational Readiness Review, a DOE Headquarters review team will conduct a Federal Operational Readiness Review prior to Isotek receiving approval to start operations for the Initial Processing Campaign.

Nuclear Criticality Safety: Last week, CNS reviewed and approved a sampling plan for the unknown material that was found in a legacy drum (see 1/21/22 report). On Monday, CNS collected samples from different regions of the material: one from flakes on the rim of the drum and a second from loose surface material. In developing the sampling plan, CNS sought input from various subject matter experts to consider potential hazards associated with nuclear criticality, pyrophoricity, and shock sensitivity. Nuclear criticality safety personnel revised the existing deficiency report to provide guidance for sampling the material in the drum. Y-12 analytical chemistry staff will analyze the samples to characterize the material in order for CNS to develop a plan to safely disposition the contents of the drum.